

MULTIPLE HAZARD PROTECTION ARTICLES AND METHODS FOR MAKING THEM

ABSTRACT OF THE DISCLOSURE

Articles, including fabrics and film layers, are disclosed which can protect against multiple hazards, including radiation, chemical, biological agents, metal projectiles and fire hazards. In some embodiments, the fabrics and films of the present invention are used to produce garments having protection against multiple hazards and superior heat dissipating properties. A radiation protective compound is preferably created by mixing a radiopaque material, such as barium, bismuth, tungsten or their compounds, with powdered polymer, pelletized polymer or a liquid solution, emulsion or suspension of a polymer in solvent or water. This radiation protective mixture can then be laminated or otherwise adhered to other types of protective films or fabric, such as the protective polymer films or fabrics used for chemical protective garments, biological protective garments, bullet proof vests or fire retardant garments. The principles of this invention can also be applied to a broad range of other articles including surgical hoods, hospital gowns, gloves, patient drapes, partitions, coverings, jumpsuits, ponchos, uniforms, fatigues, tents, probes, envelopes, pouches, wallpaper, liners, drywall, house sidings, house foundations, house roofings etc.

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